CDC Application Module Services : A reusable set of modules to accelerate PHIN software development

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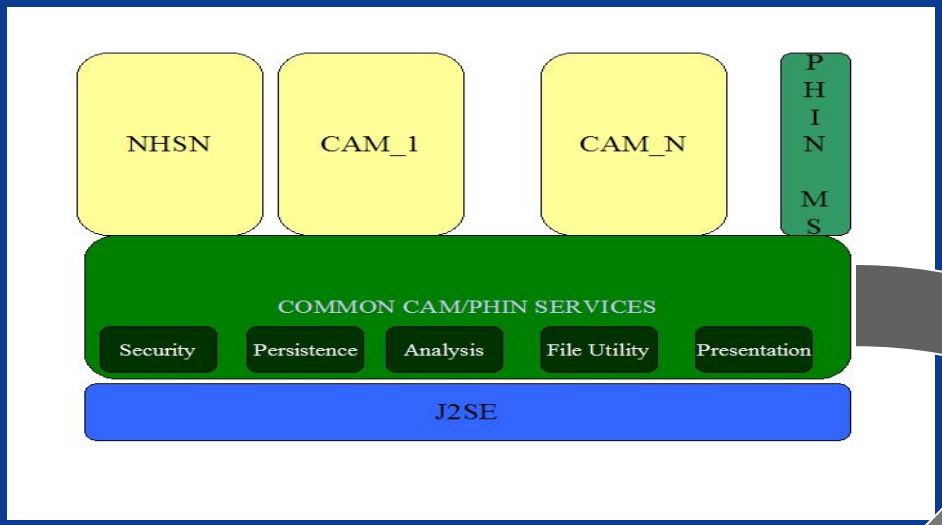
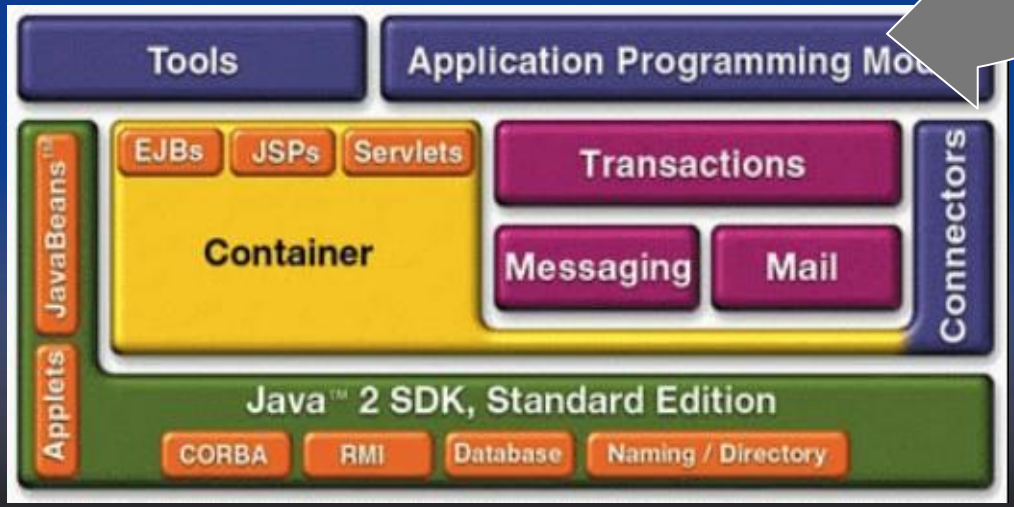
PHIN Software, CAMs, Common Frameworks and J2EE





Common CAM Services Definition

- Generic Security framework for authorization functionalities in public health applications
- Persistence framework for applications with business objects on a short development cycle
- Presentation framework based on Struts [best practices and patterns]
- File Utility services/API for proprietary data formats (e.g., Paradox, CSV) without database drivers
- Generic analysis services for independence of backend analysis engine from middle tier
- Alternative GIS API for web development without Arc IMS Tag libraries

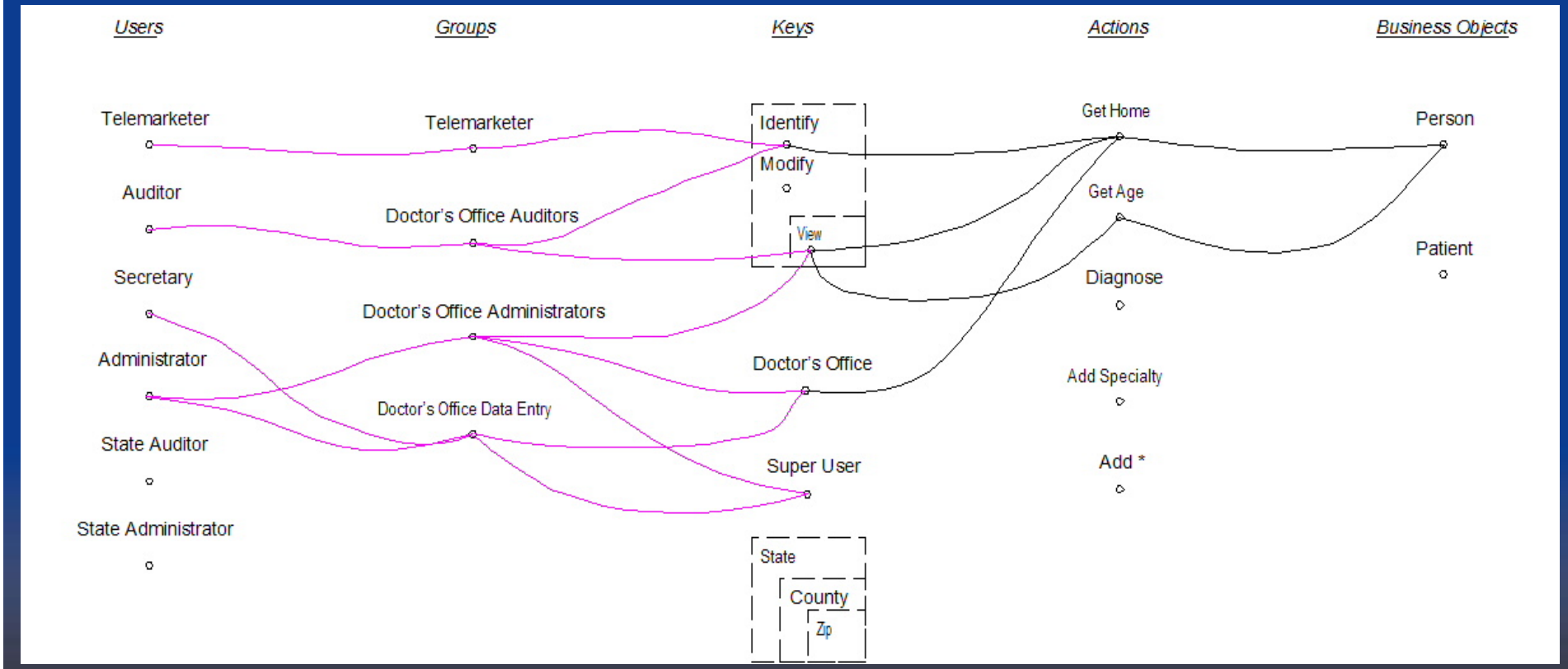
Features of Security Framework

- Requirements driven by security models of NBS, BioSense and NHSN applications : need for a generic flexible and extensible model for reuse
- Based on the generic ‘tuple’ concept for roles

  <key_1, key_2, …key_N> (‘KeySet’)

  where key_x $\notin$ fixed entity
- Implementation completely transparent to the CAM/application using ‘aspects’
- Object level reuse : security not hard coded in presentation or database tiers
- Exposed API for admin tool builder
- Security profile described in XML and also persisted to allow future integration with admin tool

Security Profile : An Example



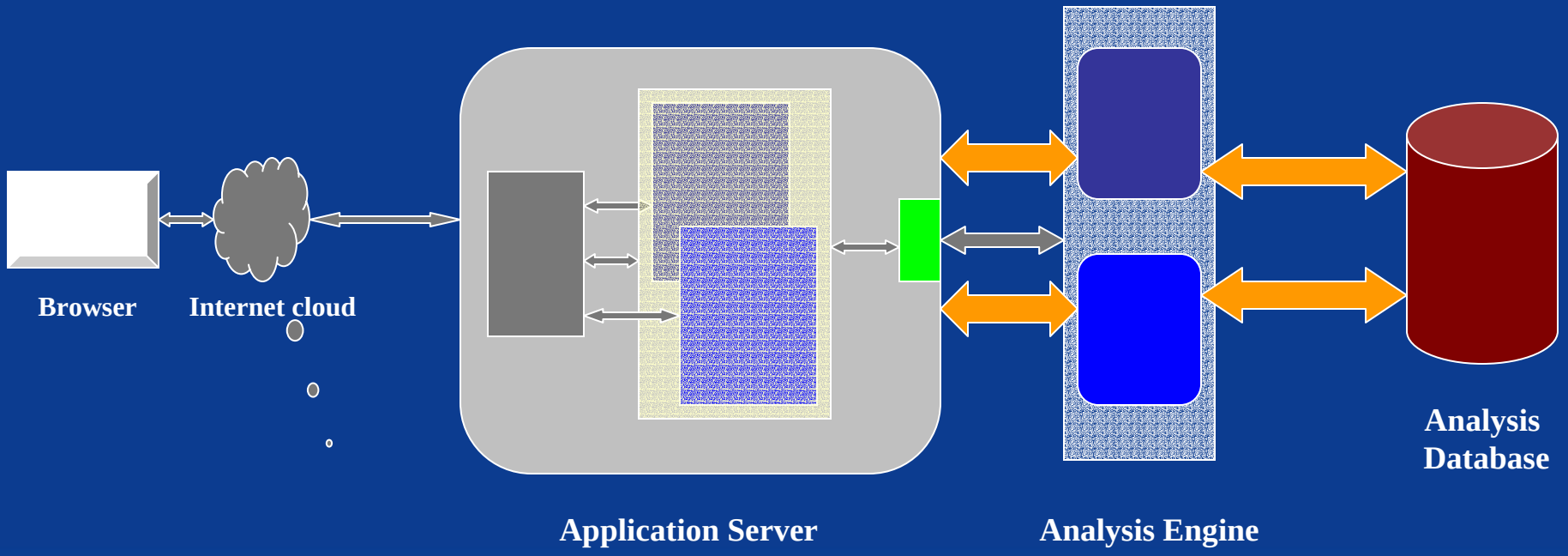
Features of Persistence Framework

- Persist domain model without writing database access code (CRUD ops)
- Metadata builder tool generates schema (DDL in SQL) automatically given just the list of domain object classes
- Proxy-based approach requiring minimal change to code for persistent classes; automated proxy builder tool support
- Object database semantics with an RDBMS backend
- Multithreading supported internally to handle load

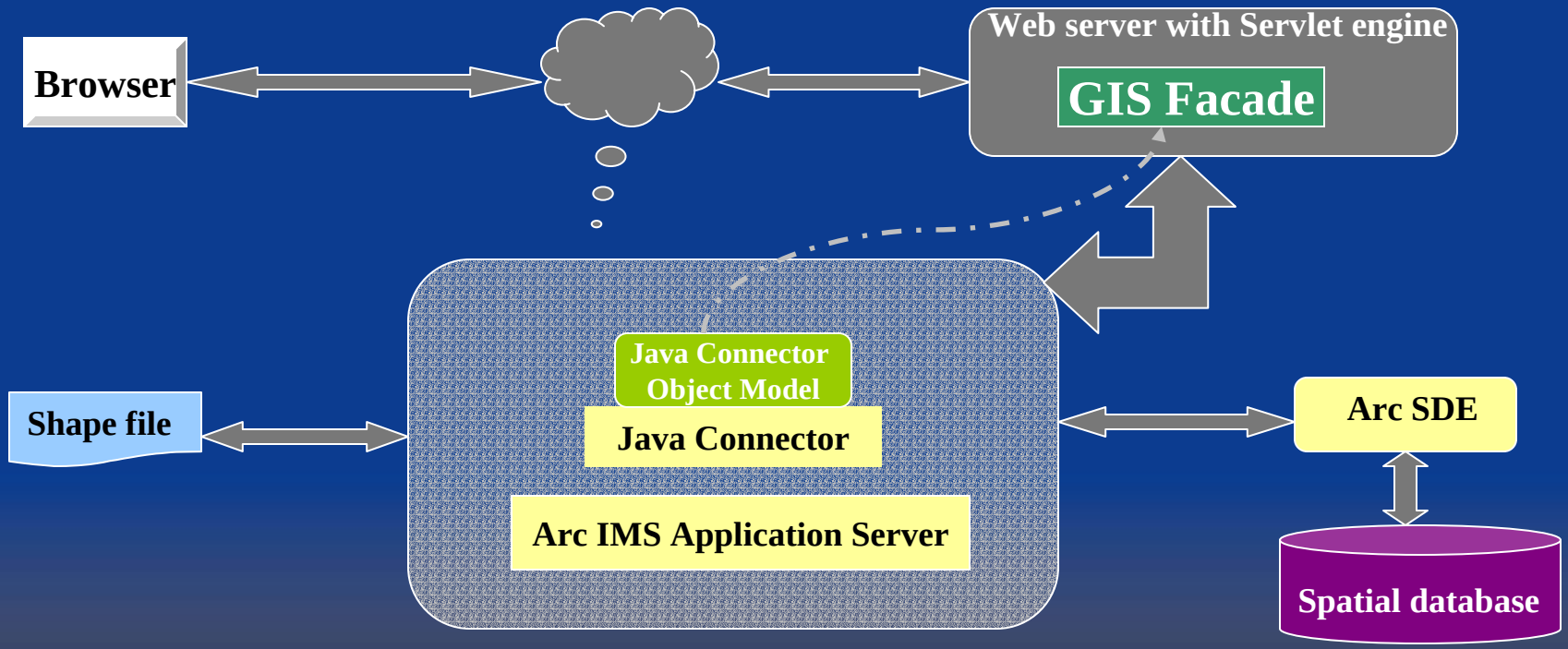
Features of Analysis, File Utility and GIS API frameworks

- Complete independence of web-based applications' middle tier from backend analysis engine
- Uses 'command' and 'factory' patterns to transfer query requests and create specific backend connectivity classes
- Current version uses SAS 8.2 backend
- File utility provides a JDBC/ODBC type API while reading from legacy files (Paradox or CSV)
- Easily extensible to handle other types of formats
- High level GIS API provides a set of Java classes to construct requests sent to ArcIMS server exposing a consolidated set of Java Connector Object Model : Façade service

Deployment scenario in Analysis : A typical sample of CAM services benefits



GIS 'Façade' API



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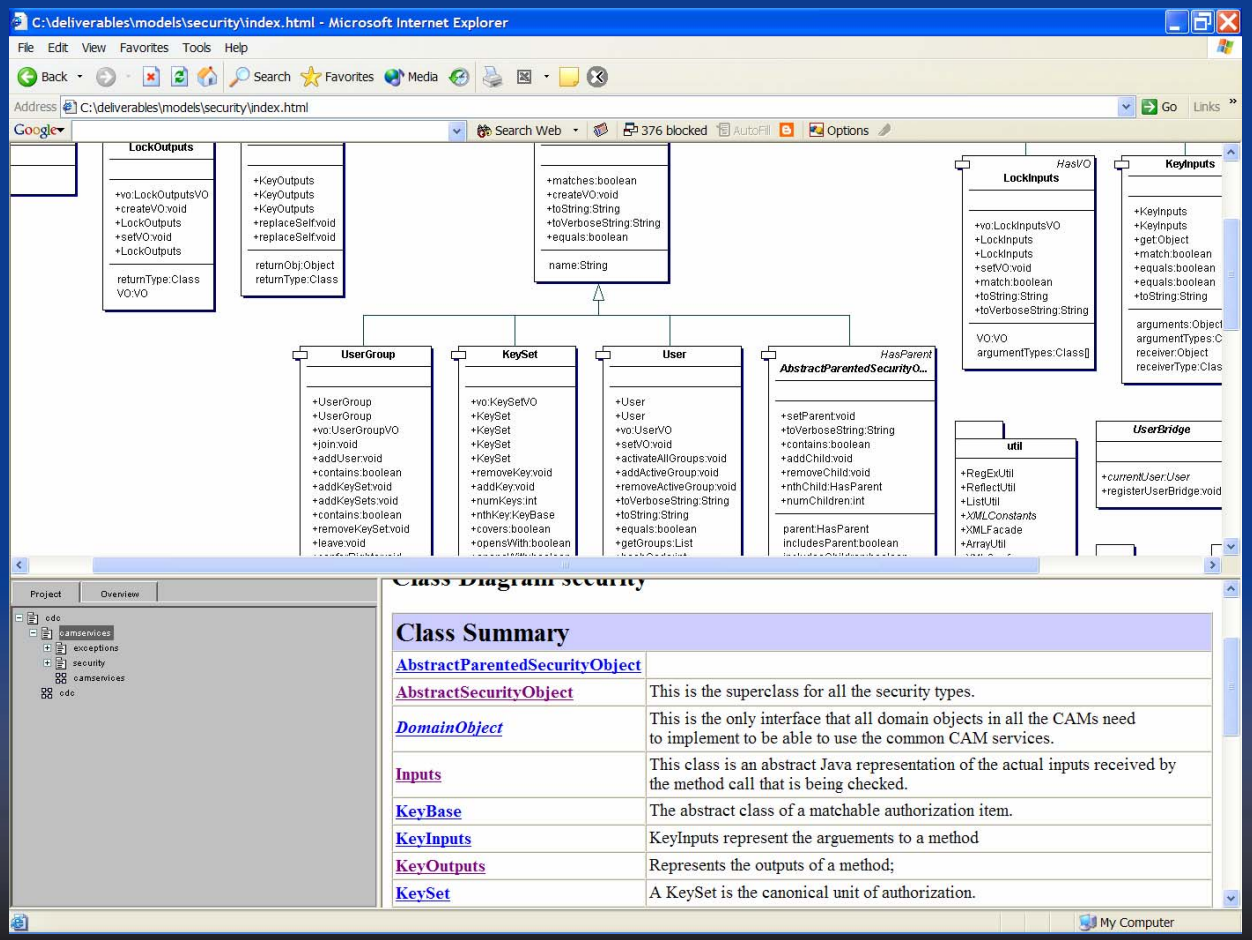
Quick tour of deliverables

- Packaged Code with Source
- Install Guide
- Users Guide
- Software Architecture Document
- APIs with web-publishable Javadocs [detailed design]
- Support for developers using Common CAM Services

A screenshot from web publishable detailed design [Javadoc]



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Thank You

Questions ?

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